



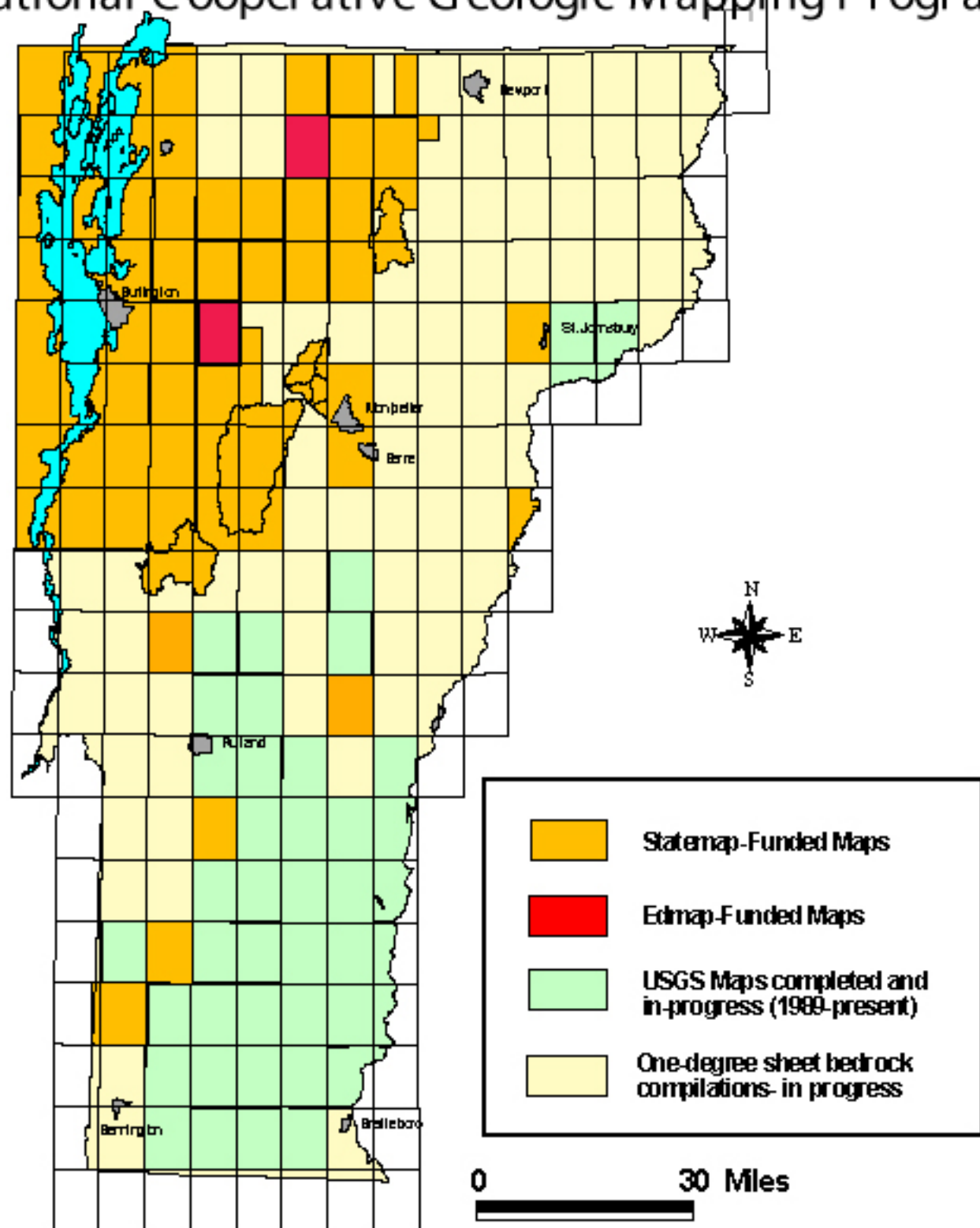
Association of American
State Geologists



United States
Geological Survey



National Cooperative Geologic Mapping Program



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Federal Fiscal Year	Vermont Project Title - Scale 1:24,000 unless otherwise indicated	State Dollars	Federal Dollars	Total Project Dollars
94-99	Bedrock and Surficial Maps and Digitization – 10 Quadrangles; 1:100000 scale Compilation of Northern Vermont; Digitization of Lake Champlain North and South and USGS Mapped Quadrangles	\$313,850	\$199,479	\$513,329
00	Surficial, Hazard, and Aquifer Maps - 2 Quadrangles and Great Brook Watershed	\$70,820	\$70,210	\$141,030
01	Surficial Map - Third Branch of the White River Bedrock Map - Colchester Quadrangle; Digitization – 3 Quadrangles	\$132,034	\$117,790	\$249,824
02	Surficial & Hazard Maps - Mad River Watershed; Bedrock & Hazard Map - Montpelier Quadrangle	\$104,430	\$104,430	\$208,860
03	Surficial, Aquifer Recharge, and Hazard Maps – Middlebury & Wild Branch Watersheds, & Manchester Quadrangle; Bedrock Map - Hinesburg Quadrangle	\$81,875	\$81,875	\$163,750
04	Surficial, Bedrock and Aquifer Maps - Worcester Mtns. Watershed and Wallingford Quadrangle	\$79,099	\$79,099	\$158,198
05	Bedrock, Surficial, and Aquifer Maps – 3 Quadrangles (in progress)	\$80,319	\$80,319	\$160,638
TOTAL		\$862,427	\$733,202	\$1,595,629

The Vermont Geological Survey (VGS - a Division of the Vermont Department of Environmental Conservation) conducts surveys and research of the geology, mineral resources, and topography of the State. VGS provides aid and advice to Vermonters. Geologic maps provide the framework for addressing environmental and resource issues. To match state resources, STATEMAP is a valuable cooperative program that expands the effectiveness of the VGS. Current emphasis is on: Mapping the surficial geology on a watershed basis and application of this information to determine the potential for geologic hazards, groundwater resources, infrastructure project siting, ecosystem analysis, highway materials, etc.; Preparation of a new State bedrock geologic map as a cooperative venture with USGS and UVM; and the integration of the bedrock, surficial, and fluvial geomorphological data to produce maps and reports that display the nature of physical and chemical geologic hazards (landslides, erosion, earthquakes, and radionuclides) in Vermont. The VGS provides advice concerning the development and working of rock and mineral deposits suitable for building, road making and economic purposes, and review of projects as they relate to Act 250, Vermont's Land Use and Development Law.

Statement of Outcome

In 2000, gross alpha radiation values up to 86 times the EPA standard were measured in ground water from private bedrock wells in Milton, VT. The Vermont Dept. of Health found 28 wells in the area that exceeded EPA gross alpha standards. However, existing bedrock maps of the area showed the wells to be in a number of different formations. The Colchester Quadrangle was mapped during 2001 using funding from the STATEMAP program. The new bedrock map of the Colchester Quadrangle showed that 27 of the 28 wells with radioactivity issues were completed in massive dolostones of the Clarendon Springs Formation. The fact that 96% of problem wells were located in the Clarendon Springs Fm. makes the Colchester map a powerful predictive tool. The bedrock map was used to warn existing residents and new housing developments of the need to test a well if it is in or near the Clarendon Springs Fm. Since long term consumption of water with elevated radioactivity can lead to cancer and kidney disease, the Colchester Quadrangle map directly helps town officials and residents avoid these health risks.

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